```
20070825.ba v04_n082.bam.20070825

>From ???@??? Sat Aug 25 22:21:50 2007 -0500
Date: Sat, 25 Aug 2007 22:20:53 CDT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4082
Message-Id: <20070826032054.1EB47318109@srvr1.theporch.com>

                  BOATANCHORS Digest 4082

Topics covered in this issue include:

  1) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by WA5CAB@cs.com
  2) Noise calculations in vacuum tubes
     by Scott Robinson <spr@earthlink.net>
  3) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by "Brian A Clarke" <brianclarke01@optusnet.com.au>
  4) My HRO story
     by Ralph Parker <rparker@dccnet.com>
  5) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by Garey Barrell <k4oah@mindspring.com>
  6) 6AH6 deald horse
     by Jsehring <jsehring@siouxvalley.net>
  7) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by WA5CAB@cs.com
  8) Re: My HRO story
     by wb3fau@att.net
  9) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by wb3fau@att.net
 10) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by "Arden Allen" <gumbear@pacbell.net>
 11) Re: Kicking the 6AH6 dead horse (long winded harangue)
     by WA5CAB@cs.com
 12) RE: FET front end in the HRO-600
     by "James C. Garland" <4cx250b@muohio.edu>
 13) RE: FET front end in the HRO-600
     by Scott Robinson <spr@earthlink.net>
 14) KSM Testing on RTTY
     by Richard Dillman <ddillman@igc.org>
 15) RE: FET front end in the HRO-600
     by "James C. Garland" <4cx250b@muohio.edu>
 16) 11 pin octal plugs available
     by Scott Robinson <spr@earthlink.net>
 17) Another noise figure
     by Scott Robinson <spr@earthlink.net>
 18) Canadian Army Communications Systems -  circa 1944
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by Jerry Proc <jerry7proc@yahoo.com>
19) Questions on AN/GRR-5 Receiver
by David Hollander <n7rk@cox.net>

From: WA5CAB@cs.com
Message-ID: <cb6.15bb2465.3401145c@cs.com>
Date: Sat, 25 Aug 2007 01:13:00 EDT
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_cb6.15bb2465.3401145c_boundary"

--part1_cb6.15bb2465.3401145c_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Now wait a minute, Arden. If you have no selectivity ahead of the mixer, which is what I take no RF amplifiers to mean, then regardless of how good the mixer is (linear mixer is a contradiction in terms) what's to keep you from having to listen to two input frequencies at the same time?

In a message dated 8/24/2007 11:45:17 PM Central Daylight Time,
gumbear@pacbell.net writes:

> So then we come to the elimination of RF amplfiers and just strive to have an ultra high amplitude linear mixer as the first stage. As we all should know vacuum tube diodes don't produce very low noise figure mixers and it wasn't until the advent of solid state that reasonably good performance was obtainable from such a front end topology. Today RF amplfiier-less highly linear FET mixers are the cat's heterodyne.
>

Robert & Susan Downs - Houston
<http://www.wa5cab.com> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_cb6.15bb2465.3401145c_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---            *
*     This post contains a forbidden message format       *
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* (such as an attached file, a v-card, HTML formatting) *
*   Mail Lists at theporch.com only accept PLAIN TEXT   *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting *
* *

--part1_cb6.15bb2465.3401145c_boundary--

Mime-Version: 1.0
Message-Id: <p06240807c2f56f7cc044@[192.168.1.2]>
Date: Fri, 24 Aug 2007 22:34:30 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Scott Robinson <spr@earthlink.net>
Subject: Noise calculations in vacuum tubes
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Folks,

On page 937 and on of the Radiotron Designer's Handbook 4th edition, the big thick one, I find a discussion of how to calculate the equivalent noise resistance of various kinds of tubes. For pentodes, it is:

Req =(I plate/(I plate + I screen)) x (2.5/Gm + 20 I screen/Gm**2)

The currents are in Amperes and the transconductances in Mhos.

Some results for pentode amplifiers:

Tube	R eq, ohms
6AC7	702
6AG5	1650
6AG7	1540
6AK5	1880
6AU6	2660
6BA6	3520
1/2 -6J6	470 (triode, included for comparison)
6BZ6	1143

and for mixer tubes:

6BE6	190,000
6SA7	240,000
6SB7-Y	62,000

From this, you might see why the 6BZ6 is a popular RF amp tube...and why bare mixer tube radios (no RF amp) are pretty deaf.

I recently discovered weird tube with four grids, and with the screen grid shaded as in a beam power tube. There seem to be three of them: 6FG5, 6FS5, and 6GU5, The grid shadowing reduces the screen current to a very low value, and the RCA tube manual claims they were designed for TV tuner RF amps.

Using the pentode formula, the 6GU5 calculated Req is 175 ohms, better even than the 6J6. Interesting...

Bear in mind that the noise is proportional only to the square root of the Req.

Regards,

Scott

Message-ID: <0b5c01c7e6e1$d199dbe0$0202a8c0@Belkin>
From: "Brian A Clarke" <brianclarke01@optusnet.com.au>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sat, 25 Aug 2007 16:05:08 +1000
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Robert,
The IF stage usually provides far more selectivity than the first RF stage.
Because IF stages are usually fixed frequency, they can be made very high Q.
73 de Brian, VK2GCE

----- Original Message -----
From: <WA5CAB@cs.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Saturday, August 25, 2007 3:13 PM
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)

> Now wait a minute, Arden. If you have no selectivity ahead of the mixer,
> which is what I take no RF amplifiers to mean, then regardless of how good
the
> mixer is (linear mixer is a contradiction in terms) what's to keep you
from
> having to listen to two input frequencies at the same time?
<snip>>
> Robert & Susan Downs - Houston

Message-Id: <3.0.6.32.20070825002537.00ae6a28@pop3.dccnet.com>
Date: Sat, 25 Aug 2007 00:25:37 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Ralph Parker <rparker@dccnet.com>
Subject: My HRO story
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Morris et al:
A number of years ago, after resisting some decent looking HROs with multi coil sets, I 'rescued' an HRO M 'project' from a friend of mine. My first one.
Four coils with no bandspread, JA meter, couple of extra holes in the panel, miniature tube sockets on plates where the 6 pin sockets used to be (no tubes), and an extra pound of solder holding the extra mile of wire more-or-less in place under the chassis and a junky looking, poorly wired h/b power supply. (My friend got it that way - his work is pretty good.)
Oh yeah, I paid too much for it, too :-)

It originally was an M or Sr., with 6D6s, etc. (Morris, I think you've got your models backwards - the M had double ended glass tubes, the 5 was next, with 6K7 metal octals.) I bought some cloth wire, intending to completely rewire it. It's still sitting on a shelf around here somewhere (untouched).

I ran across a nearby ham who restored HROs for a local museum, and he had a big bunch of parts. I got a front panel and many coils from him. Still no time for a rebuild.

A year ago, I bought another 'M' at the annual flea market near Seattle - good condx, un-modified, original tubes (6D6s), no coils, no p/s.
I re-capped it, cleaned up a few wires, built a p/s, stuck in one of my BC band coils and fired her up. A little touch-up on the RF coils, and she's purring away on the shelf, through a more-or-less matching National speaker. Surprisingly good audio and selectivity on the BC band. I can sneak up on all but three of the local 'blowtorches', hearing (and copying!) stations every 10 kc across the BC band. Amazing performance for an un-aligned single-conversion rx with tubes as old as I am. Interestingly, it has a factory installed output xformer on top of the chassis, behind the meter. Sounds pretty good on 3.870, too. Maybe I'll use it in the upcoming CX on 80m AM with my Valiant.

So, Morris, I think you'll love it. If I were me, I'd convert it to a '5', with double ended octals. If I ever get around to rebuilding my first one, that's what I'm gonna do. The p/s will probably wind up under the bench, so don't sweat the doghouse look-alike. (Maybe a cardboard cover with a scanned pix of a doghouse if you're a real stickler :-)

VE7XF

Message-ID: <46D024D1.5070904@mindspring.com>
Date: Sat, 25 Aug 2007 08:47:13 -0400
From: Garey Barrell <k4oah@mindspring.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

Robert -

Arden said two "bands" of frequencies, (as in images,) not two frequencies.

The front-end (usually L/C) of "mixer first" receivers is typically band or octave selective, and then rely on the first IF stage, which can be much higher Q, for "single" signal selection. With this technique the mixer has to handle the whole band at once, but "high level" mixers that are used for this type of receiver are capable of handling the _total_ signal power of the band, hopefully without overloading. A tall order for a receiver in Europe around 40M, but reasonable in most places.

The mixer is not linear, but IS able to handle the total signal power of the "band" without overloading (flat-topping!), or adding any "extra" signals aside from the desired sum and difference output of the desired signals and LO.

73, Garey - K4OAH
Glen Allen, VA

----- Original Message ----- From: <WA5CAB@cs.com>
> To: "Old Tube Radios" <boatanchors@theporch.com>
> Sent: Saturday, August 25, 2007 3:13 PM
> Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
>
>
>
>> Now wait a minute, Arden. If you have no selectivity ahead of the mixer,
>> which is what I take no RF amplifiers to mean, then regardless of how good
>>
> the
>
>> mixer is (linear mixer is a contradiction in terms) what's to keep you
>>
> from

```
>
>> having to listen to two input frequencies at the same time?
>>
> <snip>>
>
>> Robert & Susan Downs - Houston
>>
>
>
>
>

------------------------------
Subject: 6AH6 deald horse
Date: Sat, 25 Aug 2007 8:38:29 -0600
From: Jsehring <jsehring@siouxvalley.net>
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable
Message-Id: <20070825143825.C5AB23B99EE@filter1.e-filtering.net>

FWIW, the 6AG5 was used by Motorola as 1st RF amp in some of it's tube-type=
 low- & high-band VHF receivers, e=2Eg=2E Sensicon A, which was their top o=
f the line design from late '40s to early 60s=2E  18 tubes, big block Perma=
kay 455 kHz IF filter, I think vy nice performance even by today's standard=
s=2E  The numbers look amazing=2E  (I use 'em on on 10m & 6m FM, in a tripl=
e diversity setup on each band=2E=2E=2Ecool!)

Anyhow, have heard that when 6AG5's go flat, they cross modulate quite easi=
ly, guess it might have been a reason to change 'em out regularly on receiv=
ers in high-RF environments=2E  In the Sensicons, there's AGC (surprising i=
n an FM receiver; derived from one of the limiter stages) optionally availa=
ble that controls only the 1st RF stage=2E  Moto sez to use the AGC in envi=
ronments of close-by strong RF=2E  One these radios, there's also an option=
al, extra tuned circuit to be used in same environment=2E  It does degrade =
sensitivity a bit, but that's the trade off when needing extra RF selectivi=
ty=2E

--John WB0EQ/VE6

PS Sorry for my messy looking posts, my ISP switched email software, I got =
rid of the HTML crap but still not quite right=2E=2E

------------------------------
From: WA5CAB@cs.com
Message-ID: <d35.11ee952c.3401a61b@cs.com>
```

Date: Sat, 25 Aug 2007 11:34:51 EDT
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_d35.11ee952c.3401a61b_boundary"

--part1_d35.11ee952c.3401a61b_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Sorry. I wasn't referring to two close together frequencies but to the
desired one and the image one (as Arden had earlier except I think he phrased it
"two bands").

In a message dated 8/25/2007 2:15:04 AM Central Daylight Time,
brianclarke01@optusnet.com.au writes:
> Hi Robert,
> The IF stage usually provides far more selectivity than the first RF stage.
> Because IF stages are usually fixed frequency, they can be made very high Q.
> 73 de Brian, VK2GCE
>
> ----- Original Message -----
> From: <WA5CAB@cs.com>
> To: "Old Tube Radios" <boatanchors@theporch.com>
> Sent: Saturday, August 25, 2007 3:13 PM
> Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
>
>
> >Now wait a minute, Arden. If you have no selectivity ahead of the mixer,
> >which is what I take no RF amplifiers to mean, then regardless of how good
> the
> >mixer is (linear mixer is a contradiction in terms) what's to keep you
> from
> >having to listen to two input frequencies at the same time?
> <snip>>
> >Robert &Susan Downs - Houston
>

Robert & Susan Downs - Houston
<http://www.wa5cab.com> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_d35.11ee952c.3401a61b_boundary

Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---            *
*     This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

--part1_d35.11ee952c.3401a61b_boundary--

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: Ralph Parker <rparker@dccnet.com>
Subject: Re: My HRO story
Date: Sat, 25 Aug 2007 15:42:38 +0000
Message-Id:
<082520071542.27237.46D04DED000F2DA700006A6521587667209A0E00CC0D99@att.net>

Well now heres an idea- just buy a stuffed dog at the toy store, take out the stuffing and put the power supply in the dog! Done deal!

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Arden Allen" <gumbear@pacbell.net>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sat, 25 Aug 2007 16:36:51 +0000
Message-Id:
<082520071636.6393.46D05AA300026873000018F921603831169A0E00CC0D99@att.net>

I was getting a bit anxous waiting for you to give us classroom. Yes, i must agree about
using FETs in the front end, my present project a Heath SB313 a real nice performing SS
receiver.   Unknowing to me- did the HRO 600 use any FETs? Russ.

Message-ID: <007f01c7e74d$acc35910$1b9f480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sat, 25 Aug 2007 12:08:14 -0700
MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Read, "wide bandwidth filter" and "very high first IF frequency" in my previous paragraph,
Bob. The image falls outside the bandpass filter.

"Linear mixer" is not a contradiction in terms if you think of how a class C amplifier is amplitude modulated. What's really happening in both cases is **transconductance modulation,** i.e., one or both signals modulate the gain of the amplifier. Conversely, modulation by distortion is **intermodulation** and that gets you a mess; a mixer that distorts is no better than an RF amp that distorts.

Unfortunately the history of radio has a few conveniently chosen terms that confuse instead of inform. Remember mixers and converters were originally referred to as "first detectors."

Arden

----- Original Message -----
From: <WA5CAB@cs.com>
To: <gumbear@pacbell.net>; <boatanchors@theporch.com>
Sent: Friday, August 24, 2007 10:13 PM
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)

> Now wait a minute, Arden. If you have no selectivity ahead of the mixer,
> which is what I take no RF amplifiers to mean, then regardless of how good the
> mixer is (linear mixer is a contradiction in terms) what's to keep you from
> having to listen to two input frequencies at the same time?
>
> In a message dated 8/24/2007 11:45:17 PM Central Daylight Time,
> gumbear@pacbell.net writes:
> > So then we come to the elimination of RF amplfiers and just strive to have
> > an ultra high amplitude linear mixer as the first stage. As we all should
> > know vacuum tube diodes don't produce very low noise figure mixers and it
> > wasn't until the advent of solid state that reasonably good performance was
> > obtainable from such a front end topology. Today RF amplfiier-less highly
> > linear FET mixers are the cat's heterodyne.

> >
>
> Robert & Susan Downs - Houston
> <http://www.wa5cab.com> (Web Store)
> MVPA 9480
> <wa5cab@cs.com> (Primary email)
> <wa5cab@comcast.net> (Backup email)
>
>

From: WA5CAB@cs.com
Message-ID: <c22.1ca6a7e2.3401df46@cs.com>
Date: Sat, 25 Aug 2007 15:38:46 EDT
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_c22.1ca6a7e2.3401df46_boundary"

--part1_c22.1ca6a7e2.3401df46_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

OK. I'll buy most of that, especially as I recently bought a radio built
that way. :-)

In a message dated 8/25/2007 2:26:57 PM Central Daylight Time,
gumbear@pacbell.net writes:
> Read, "wide bandwidth filter" and "very high first IF frequency" in my
> previous paragraph,
> Bob. The image falls outside the bandpass filter.
>
> "Linear mixer" is not a contradiction in terms if you think of how a class C
> amplifier is amplitude modulated. What's really happening in both cases is
> **transconductance modulation,** i.e., one or both signals modulate the
> gain of the amplifier. Conversely, modulation by distortion is
> **intermodulation** and that gets you a mess; a mixer that distorts is no
> better than an RF amp that distorts.
>
> Unfortunately the history of radio has a few conveniently chosen terms that
> confuse instead of inform. Remember mixers and converters were originally
> referred to as "first detectors."
>

Robert Downs - Houston
<http://www.wa5cab.com> (Web Store)

MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_c22.1ca6a7e2.3401df46_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*          ---REMAINDER OF MESSAGE TRUNCATED---            *
*      This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*     Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

--part1_c22.1ca6a7e2.3401df46_boundary--

From: "James C. Garland" <4cx250b@muohio.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: FET front end in the HRO-600
Date: Sat, 25 Aug 2007 14:02:47 -0600
Message-ID: <00f101c7e752$e907b740$02e83586@Garland>
MIME-Version: 1.0
Content-Type: text/plain;
     charset="US-ASCII"
Content-Transfer-Encoding: 7bit

-----Original Message-----
From: owner-boatanchors@theporch.com [mailto:owner-boatanchors@theporch.com]
On Behalf Of wb3fau@att.net
Sent: Saturday, August 25, 2007 10:37 AM
To: Old Tube Radios
Cc: Arden Allen
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Unknowing to me- did the HRO 600 use any FETs? Russ.

****

Yes, the HRO-600 used early FETS (type CP651) in the front end, and also double-balanced diode mixers. Here's a reverse-engineered schematic of the HRO-600 RF stage from my website:

http://www.w8zr.net/vintage/receivers/hro600images/HRO600_frontend_schematic.JPG

****
Jim Garland W8ZR
Santa Fe, NM
www.w8zr.net
****

Mime-Version: 1.0
Message-Id: <p06240802c2f642c7235d@[192.168.1.2]>
Date: Sat, 25 Aug 2007 13:36:59 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Scott Robinson <spr@earthlink.net>
Subject: RE: FET front end in the HRO-600
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Folks,

Scott comments on FET front ends (see HOR600 schematic, referenced below):

The GE Superradio AAM/FM high quality portables use a FET front end, and have a very quiet little switcher on board to make +50V to power it. I expect they were trying to accommodate close proximity to big BC and Fm transmitters by using the high power voltage.

Regards,

Scott

At 2:02 PM -0600 8/25/07, James C. Garland wrote:
>
>Yes, the HRO-600 used early FETS (type CP651) in the front end, and also
>double-balanced diode mixers. Here's a reverse-engineered schematic of the
>HRO-600 RF stage from my website:
>
>http://www.w8zr.net/vintage/receivers/hro600images/HRO600_frontend_schematic
>.JPG
>

Message-ID: <15249252.1188074375691.JavaMail.root@mswamui-billy.atl.sa.earthlink.net>
Date: Sat, 25 Aug 2007 13:39:35 -0700 (GMT-07:00)
From: Richard Dillman <ddillman@igc.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: KSM Testing on RTTY

Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: 7bit

As of 2000Z KSM is sending press and weather using Baudot and FEC on 12631kc.
Reception reports are solicited.

Richard Dillman
chief Operator, KSM

From: "James C. Garland" <4cx250b@muohio.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: FET front end in the HRO-600
Date: Sat, 25 Aug 2007 14:49:17 -0600
Message-ID: <010401c7e759$6796f340$02e83586@Garland>
MIME-Version: 1.0
Content-Type: text/plain;
  charset="US-ASCII"
Content-Transfer-Encoding: 7bit

First use of MOSFETs I'm aware of is in the Davco DR-30. The Davco used very early p-channel enhancement MOSFETS, which were incredibly fragile and now completely unobtainable. It's unusual to find a DR-30 with a functioning RF stage. Fortunately, it's not hard to modify the circuit to accommodate contemporary MOSFETs.

Jim

****
Jim Garland W8ZR
Santa Fe, NM
www.w8zr.net
****

-----Original Message-----
From: owner-boatanchors@theporch.com [mailto:owner-boatanchors@theporch.com]
On Behalf Of Scott Robinson
Sent: Saturday, August 25, 2007 2:37 PM
To: Old Tube Radios
Subject: RE: FET front end in the HRO-600

Folks,

Scott comments on FET front ends (see HOR600 schematic, referenced below):

The GE Superradio AAM/FM high quality portables use a FET front end,

and have a very quiet little switcher on board to make +50V to power
it. I expect they were trying to accommodate close proximity to big
BC and Fm transmitters by using the high power voltage.

Regards,

Scott

At 2:02 PM -0600 8/25/07, James C. Garland wrote:
>
>Yes, the HRO-600 used early FETS (type CP651) in the front end, and also
>double-balanced diode mixers. Here's a reverse-engineered schematic of the
>HRO-600 RF stage from my website:
>
>http://www.w8zr.net/vintage/receivers/hro600images/HRO600_frontend_schemati
c
>.JPG
>

Mime-Version: 1.0
Message-Id: <p06240804c2f65d6b61a1@[192.168.1.2]>
Date: Sat, 25 Aug 2007 15:30:02 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Scott Robinson <spr@earthlink.net>
Subject: 11 pin octal plugs available
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Folks,

I have three of these, with short bits of cable attached, rescued
from GE police radios headed for the recycler. They are the usual
Amphenol S- kind, with removable shells, not potted and useless.

$5 each shipped.

Yours for working Junque,

Scott

Mime-Version: 1.0
Message-Id: <p06240805c2f66f6e9a51@[192.168.1.2]>
Date: Sat, 25 Aug 2007 16:49:15 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Scott Robinson <spr@earthlink.net>
Subject: Another noise figure
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Folks,

I just calculated the Req for a 6EH7, a 9 pin miniature frame grid remote-cutoff pentode, and it comes out to 564 ohms, about the best regular pentode I know of.

The only catch to high Gm tubes is that the input resistance falls at high frequencies due to transit time from cathode to grid (likely important above 20 MHz) and is worse for high Gm tubes, so the tube may load the antenna coil more, reducing its selectivity a bit.

Regards,

Scott

Date: Sat, 25 Aug 2007 20:15:35 -0400 (EDT)
From: Jerry Proc <jerry7proc@yahoo.com>
Subject: Canadian Army Communications Systems - circa 1944
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <416511.72720.qm@web90614.mail.mud.yahoo.com>

Hello Everyone,

As a result of the loan of a very rare pamphlet by Denis Chouinard VE2DSH, I have been able to post a number of diagrams and equipment tables which essentially provide a snapshot of the Canadian Armyís communications system in Canada circa 1944.

http://www.jproc.ca/army/

What will likely be of most interest to this group is the drawing which shows the undersea cables in the Atlantic and Pacific Oceans.

http://www.jproc.ca/army/army_atlantic_and_pacific_cables.jpg

Some of the diagrams have ìseam gradientsî. Hopefully the cosmetics will not detract from the valuable information conveyed in the drawings. This is the best I can do with the tools I have.

--
Regards,
Jerry Proc
E-mail: jerry7proc@yahoo.com

Be smarter than spam. See how smart SpamGuard is at giving junk email the boot with the All-new Yahoo! Mail at http://mrd.mail.yahoo.com/try_beta?.intl=ca

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Message-ID: <46D0F18B.3030704@cox.net>
Date: Sat, 25 Aug 2007 20:20:43 -0700
From: David Hollander <n7rk@cox.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Questions on AN/GRR-5 Receiver
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

I have an AN/GRR-5 with a dead power supply. The relay clunks when turned on but the vibrators are not coming on. I have tested both vibrators and they are OK and all fuses are good.

Any suggestions before I start tearing into this? I do have the manual.

I seem to recall something like this with the AN/GRR-5 I had as a kid in the sixties but it's too long ago to recall what it was and the fix.

Tnx,

Dave N7RK
--
****
Dave N7RK   Boatanchors Home Page: http://members.cox.net/n7rk
Phoenix, Arizona   *DXCC Honor Roll*   *WAZ#22 - 75 Meter SSB*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor and Antique Radio Collector

End of BOATANCHORS Digest 4082
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